INDIAN SCHOOL MUSCAT

SENIOR SECTION

DEPARTMENT OF MATHEMATICS

CLASS IX

TERM 2

WORKSHEET NO - 1

LINEAR EQUATIONS IN TWO VARIABLES

SECTION A: (1 MARK)

1. Find **m** , if point (7, -3) lies on the equation $y-\frac{3}{7} = m\left(x-\frac{2}{7}\right)$ (NCERT EXEMPLAR) — $(m = \frac{-24}{47})$
2. Find the value of **α** in the equation **α** x + y =5 if x=2 and y=3. — (α=1)
3. If $x-4=\sqrt{3}y$ is written in the standard form **a**x + **b**y + **c** =0 then find the values of **a** , **b** , **c**. — (a=1, $b=-\sqrt{3}$, c= - 4)

SECTION B: (2 MARKS)

4. Represent an equation of a straight line which is parallel to x- axis and at a distance of 2.5 units below it .
5. For the first Km, the fare is Rs15 and for the successive distance it is Rs8 per Km. Taking distance covered as x (Km) and the total fare as y (RS) Represent a linear equation in two variables. — (Y=15 + 8(x-1))
6. If (2,3) and (4,0) lie on the graph of the equation ax + by =1 then find a and b. — (a= 1/4 , b= 1/6)
7. Find the co-ordinates of the points where the graph of the equation 7x – 3y =4 cuts x-axis and y-axis. — (X axis $(\frac{4}{7}, 0)$ Y axis $(0, \frac{-4}{3})$)

SECTION C: (3 MARKS)

8. Solve $\frac{3x+2}{7} + \frac{4(x+1)}{5} = \frac{2(2x+1)}{3}$ — (X=4)
9. Draw the graph of the linear equation y=x and y=-x on the same Cartesian plane What do you observe? — (Point of intersection is origin)
10. Draw the graph for the equation 2x +3 y = 12 and check whether the points (4.5 ,1) and (1.5 , 3) lies on the graph.
11. Give the geometrical interpretation of 5x + 3 = 3x -7 as an equation
    i) In one variable ii) In two variables

SECTION D: (4 MARKS)

12. Draw lines x= 4, y = 2, x = y on the same graph paper and identify what type of the figure obtained? Also write the point of vertices of this figure formed. (NCERT EXEMPLAR) — Triangle With vertices (2,2),(4,2), (4,4)
13. Ram is half of his father's age. Twenty years ago , the age of father was six times age of Ram .Find the age of Ram and his father. — (Ram=25yrs, Father = 50yrs)
14. Draw a Triangle whose sides are represented by x=0 , y=0 , x + y =4 . Also find the Area of the Triangle . — A(Triangle)=8sq.units
15. Draw the graph for 2x + y = 6 and find the points where line meet the two axes. If (2,3) and (4,0) lie on the graph of the equation **a**x + **b**y =1 then find **a** and **b**. — (X axis (3,0) Y axis (0,6)) (a= 1/4 , b= 1/6)